



230467

USEPA Comments on the April 2001 Operations and Maintenance (O&M) Plan

1. Response 6, Section 3.1.2, System Monitoring: After initial start-up of the gas extraction system, the flare died and did not restart automatically. Therefore, the gas extraction system shut down. This happened on a Saturday, and the flare was not restarted until Monday. During the O&M period, no dedicated operator will be present at the Site to respond to such shutdowns. To ensure that such a delay does not occur during O&M, include the following wording in Section 3.1.2:

"To address the flare shutting down and not restarting automatically, the O&M staff member will respond by conducting a remote telemetry system check or by visiting the Site during the next working day after the occurrence of a flare shutdown."

Response: The text listed above has been added to the first paragraph in Subsection 3.1.2 following the sentence that reads "If the restart sequence does not correct the alarm condition, the flare will remain shut down and the autodialer will dial a preprogrammed telephone number to notify the operator."

2. Response 8, Section 3.2: The USEPA expects the leachate collection system to operate continuously, for intervals as lengthy as are reasonable. Therefore, add the following wording to Section 3.2.3:

"To the extent practical, leachate levels in the storage tank will be maintained to provide for continuous operation of the leachate collection system. Removal of leachate from the storage tank by tanker truck or by direct discharge to the sanitary sewer will be performed to prevent shutdown of the system for no more than a brief period."

Response: The text listed above has been added at the end of paragraph 3 of Subsection 3.2.3.

3. Response 10, Table 4-1: Please provide the revised table (including headers for all columns) that was omitted from the previous submission.

Response: The table is included in the final O&M Plan document.

4. *Appendices A, B, and C: Please provide the missing information.*

Response: Manufacturer's information for the landfill gas collection and leachate collection systems is provided as Appendices A and B, respectively, of the final O&M Plan document. Appendix C, Monitoring Inspection Forms, was previously included in the November 2000 Draft O&M Plan submittal and is also included in the final O&M Plan document.

3.1.2 System Monitoring

The capability to monitor the system as a whole is provided at the blower station. The pressure (positive and negative); the methane, carbon dioxide, balance gas (nitrogen), and oxygen contents; the temperature; and the outlet gas flow rate will be monitored. Automated system monitoring equipment is included within the system to prevent potential equipment damage or a release of landfill gas to the atmosphere. Automated monitoring includes flame detection with a UV sensor within the flare, and a high-temperature (2,000°F) and a low-temperature (1,400°F) alarm. In the event that a flame is not detected or the high- or low-temperature alarm condition is reached, the system will shut itself down and the controls of the flare will attempt an automated restart of the system. If the restart sequence does not correct the alarm condition, the flare will remain shut down and the autodialer will dial a preprogrammed telephone number to notify the operator. To address the flare shutting down and not restarting automatically, the O&M staff member will respond by conducting a remote telemetry check or by visiting the Site during the next working day after the occurrence of the flare shutdown. Temperature and flow rate are continuously monitored automatically and are recorded on a strip chart within the blower/flare control panel. Further details of the alarm conditions and other system controls are included in Appendix A. The following steps outline the procedures for monitoring each of these parameters:

Measuring Pressure

1. Take pressure measurements prior to gas sampling being careful not to introduce atmospheric air into the monitoring port. Connect the hose on the low side of a magnehelic pressure gauge to the monitoring port prior to opening the valve. Open the valve, and record the pressure. Close the valve.
2. Perform the above procedure on both the positive pressure and vacuum sides of the blower.

Measuring Methane, Carbon Dioxide, Balance Gas (Nitrogen), and Oxygen Contents

1. Equipment used for monitoring gas concentrations should be turned on prior to taking system gas readings in order to obtain stable readings on ambient air gas concentrations. After ambient gas levels have stabilized, attach the inlet hose of the gas monitoring instrument to the monitoring port, prior to opening the valve. Open the valve to draw a gas sample. Allow the readings to stabilize (typically about 60 seconds), and record the values.

of tank levels from on-site and off-site. For specifics of the leachate tank level monitoring equipment and operation, see Appendix B. In general, the low-level alarm will discontinue operation of the pump within the tank to prevent pump failure. A high-level alarm indicates the tank is nearing capacity and notifies O&M personnel that leachate hauling is required. A high high-level alarm is also included to terminate pumping at the extraction wells to prevent exceeding the capacity of the collection tank. When the high-level or the high high-level alarm is activated, the autodialer will call the system operator. The system operator will coordinate leachate removal from the site. The frequency of leachate removal from the site may initially be set up on a set schedule (daily, weekly, etc.) depending on the quantities of leachate collected.

The response time for a leachate hauler to arrive on-site after a high-level alarm condition is reached, will vary on the operating period of the system depending on leachate collection rates throughout the O&M period. Initially, the response time will not be a factor since the leachate hauler will be scheduled for daily hauling.

The response time after the initial startup period will be based upon the time it takes to go from a high-level alarm condition to a high high-level alarm condition. The response time to a high-level alarm condition during normal operations will be sufficient to prevent reaching a high high-level alarm condition which will shut the leachate collection system down. To the extent practical, leachate levels in the storage tank will be maintained to provide for continuous operation of the leachate collection system. Removal of leachate from the storage tank by tanker truck or by direct discharge to the sanitary sewer will be performed to prevent shutdown of the system for no more than a brief period.

**Table 4-1
Maintenance Schedule Summary**

EQUIPMENT/ACTION	WK	MO	QTR	6 MO	YR	AS NEEDED
Landfill Cover						
1. Inspect for vegetation stress.			X			
2. Inspect for erosion.			X			
3. Inspect condition of vegetation.			X			
4. Mow/Cut vegetation on an as-needed basis, but at least annually.					X	
5. Inspect for ponding of surface water			X			
6. Reseed or regrade.						X
7. Correct differential settlement.						X
Site Security						
1. Inspect security fencing and signage.			X			
2. Lubricate locks.					X	
Leachate Pumps						
1. Verify pump operation (monthly for first year of operation).			X			
2. Remove pump and inspect for frayed cables, looseness of the impeller, and general condition.					X	
3. Clean pumps of corrosion and buildup of biological growth.						X
Leachate Storage Tank and Loadout Area						
1. Inspect condition of vegetation and security fence. Mow or cut vegetation as needed.			X			
2. Inspect leachate loadout facilities.		X				
LFG and Leachate Extraction Wells						
1. Inspect for settling, weeds, and debris. Remove weeds from around vault.		X				
2. Inspect integrity of hardware, locks, pipes, and valves.		X				
3. Inspect integrity of vault.		X				
4. Clean out siltation in well.						X
Extraction System Piping						
1. Inspect for settling, weeds, leaks, water.			X			
2. Operate header isolation valves.					X	
3. Inspect for surging of condensate.			X			
Condensate Sumps						
1. Inspect and remove weeds and debris from around pump stations.			X			
2. Check for leaks and proper functioning of pumps.		X				
3. Inspect pump stations for leaks.					X	

Table 4-1 (Continued)
Maintenance Schedule Summary

EQUIPMENT/ACTION	WK	MO	QTR	6 MO	YR	AS NEEDED
<i>Leachate Collection Tank</i>						
1. Inspect and remove weeds and debris from around the tank.			X			
2. Check and record condensate level in tank. Arrange for liquid disposal if necessary. Record liquid levels daily through PLC.	X					
3. Remove pump and inspect for wear. Clean and perform maintenance.					X	
4. Check for leaks, visible damage, or corrosion.		X				
<i>Blower Facility</i>						
1. Inspect piping, fittings, valves, and seals for leaks or breakage.		X				
2. Check for belt condition, loose connections, or vibration at blower.		X				
3. Check operation of the fail-closed valve.		X				
4. Check building heater.		X				
5. Check building exhaust fan.			X			
6. Inspect fire extinguishers.			X			
7. Lubricate blower motor bearings.			X			
8. Lubricate blower bearings.			X			
9. Lubricate building exhaust fan.				X		
10. Calibrate building gas detection sensors.				X		
11. Check motor/blower alignment.					X	
12. Tighten electrical connections on motor control panel and at motor.						
<i>Air Compressor and Dehydrator System</i>						
1. Fluid level inspection		X				
2. Fluid filter replacement					X	
3. Inspect cooler and clean					X	
4. Check relief valve	X					
5. Desiccant replacement (3 to 5 years, see manufacturer's data)						X
6. Dryer pilot air filter					X	

Table 4-1 (Continued)
Maintenance Schedule Summary

EQUIPMENT/ACTION	WK	MO	QTR	6 MO	YR	AS NEEDED
<i>Flare</i>						
1. Drain flame arrestor.		X				
2. Check propane level.		X				
3. Visually inspect igniter.		X				
4. Remove weeds or debris.			X			
5. Lubricate air louvers.			X			
6. Visually inspect refractory.			X			
7. Inspect solenoids.			X			
8. Clean/Inspect flame scanner view and vent.			X			
9. Purge blower motor lubrication.			X			
10. Clean flame arrestor.					X	